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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,180	01/18/2002	Shen Tsung-Lin	BHT-3183-37	7582

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EXAMINER

STRIMBU, GREGORY J

ART UNIT	PAPER NUMBER
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3634

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/050,180

Applicant(s)

TSUNG-LIN, SHEN

Examiner

Gregory J. Strimbu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "100" on line 15 of page 3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1-12 are objected to because recitations such as "enclosed one end" on line 8 of claim 1 and "a parallel direction of the guide stems" on lines 8-9 of claim 1 are grammatically awkward and confusing. Appropriate correction is required.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the legal phraseology "means" on line 4 should be avoided. On lines 4-6, "[w]hile the second piston rod . . . synchronously" is confusing since it is unclear what element of the invention drives the lever, a transmitting rod and a connecting rod. On lines 6-7, "[t]he direction-changing mechanisms" is confusing since the applicant has failed to set forth the elements comprising the direction changing mechanisms. On line 9, it is suggested that the applicant insert the article --the-- before "by" to avoid confusion.

Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because it is replete with numerous informalities such as "equipments" on line 12 of page 3, "piton" on line 20 of page 3, "121of" on line 6 of page 4, and "with one ends" on lines 10-11 of page 4.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 1-12, as best understood by the examiner, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It should be noted that the claims are replete with 35 USC 112 informalities. Therefore, the following is only a partial listing of the numerous informalities currently in the claims. It is suggested that the applicant review and amend the claims so as to conform with section 112.

Recitations such as "long stroke" on line 2 of claim 1 render the claims indefinite because it is unclear what comprises a "long" stroke. How long does a stroke have to be before it can be characterized as a "long" stroke. Recitations such as "a frame elevator" on line 4 of claim 1 render the claims indefinite because it is unclear if the applicant is referring to the frame elevator set forth above or is attempting to set forth another frame elevator in addition to the one set forth above. Recitations such as "mounting" on line 4 of claim 1 render the claims indefinite because it is unclear what the applicant is attempting to set forth. To what element does the frame elevator mount the first piston rods, guide stems and short stroke cylinder? Is the applicant attempting to set forth that the first piston rods, guide stems and short stroke cylinder are all mounted on the frame elevator? Recitations such as "another end" on line 5 of claim 1 render the claims indefinite because the applicant has failed to set forth a first end of the first piston rods. Recitations such as "each second piston rod connects through . . . and a connecting rod connected" on lines 10-11 render the claims indefinite because it is unclear what the applicant is attempting to set forth. Recitations such as "the lever" on line 11 of claim 1 render the claims indefinite because it is unclear to which of the plurality of levers set forth above the applicant is referring to. Recitations such as "close to" on line 11 of claim 1 render the claims indefinite because it is a relative term whose meaning cannot be readily ascertained by one with ordinary skill in the art and is not defined by the specification. Recitations such as "the support axis is pivoted on the support frame" on line 12 of claim 1 render the claims indefinite because it is unclear how an axis can be pivoted on the support frame. It appears that the lever rather than

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the axis of the lever is pivoted on the support frame. Recitations such as "one end of each lever is pivoted with" on lines 12-13 of claim 1 render the claims indefinite because it is unclear what the applicant is attempting to set forth. Is the applicant setting forth that each lever is pivotally connected to a respective one of the second piston rods? Recitations such as "a direction-changing mechanism" on lines 15-16 of claim 1 render the claims indefinite because it is unclear what comprises a direction changing mechanism since it appears that the applicant has already set forth elements of the direction changing mechanism above. Recitations such as "the predetermined position" on lines 18-19 of claim 1 render the claims indefinite because they lack antecedent basis.

Allowable Subject Matter

Claims 1-12, as best understood by the examiner, would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record, absent applicant's own disclosure, fails to teach the entire combination of elements set forth in the claimed invention. Specifically, the prior art of record fails to teach an apparatus for sealing a vacuum chamber comprising a plurality of long stroke cylinders with a plurality of first piston rods for moving a frame elevator, the frame elevator mounting the first piston rods, guide stems and at least a short stroke cylinder, wherein another end of each first piston rod is enclosed by the

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long stroke cylinders for linearly moving the frame elevator along a direction, a support frame connected at the other ends of the guide stems, each short stroke cylinder enclosing one end of a second piston rod, the second piston rod is parallel to the guide stems and the first piston rods for moving along a direction parallel to the guide stems, each second piston connects through at least a lever, at least a transmitting rod and a connecting rod, the lever has a support axis close to the transmitting rod, the support axis is pivoted on the support frame, one end of each lever is pivoted with the second piston rod and the other end of the lever is pivoted with the transmitting rod, each transmitting rod is pivoted with the middle of the connecting rod, the two ends of each connecting rod pivoted with at least a direction changing mechanism, respectively, a door pivoting with the direction changing mechanisms. See lines 4-17 of claim 1.

Additionally, the prior art of record fails to teach an apparatus for sealing a vacuum chamber comprising a flat shell having an opening, a door fitted in the shell, the door mounting a plurality of direction changing mechanisms, a sealing mechanism including a frame elevator, a support frame and guide stems for fixedly connecting with the frame elevator and the support frame, wherein at least a short stroke cylinder having a second piston rod is fitted on the frame elevator for moving the second piston rod to the predetermined point, the second piston rod drives at least a lever, a transmitting rod and a connecting rod, the support axis of the lever is pivoted on the support frame, the transmitting rod connects with the lever and the middle of the connecting rod, the two ends of the connecting rod are pivoted with the direction changing mechanisms respectively for moving the door to the opening of the shell, and an elevating

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mechanism including a plurality of long stroke cylinders with first piston rods, wherein the first piston rods connect the frame elevator, the long stroke cylinders drive the first piston rods to the predetermined points for vertically moving the door and the sealing mechanism, the first piston rods are parallel to the second piston rod. See lines 1-18.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Loveless, Coats, Miraldi, Hackley, Bachmann, Anderson, Coffman and Baguet are cited for disclosing a closure member for sealing a chamber. Owen '349 and 845, Lomax et al., Margison et al. and Kamezaki '505 and '468 are cited for disclosing a piston/cylinder actuator for a closure member.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Strimbu whose telephone number is 703-305-3979. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 703-308-2686. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.



Gregory J. Strimbu
Primary Examiner
Art Unit 3634
December 29, 2003